

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: Andy Wallace <wallace@mc.com>  
Subject: ...AT-1 runs...  
Message-ID: <9602050154.AA08200@kali>

Checked out the modded Heath AT-1 today...nothing too unusual so I got it on the air! I don't know how old the tubes are, but the output is a whopping seven watts on 80 into a dummy load. On the air, it's five. I called CQ for a while in the Novice band tonight but nobody answered. We'll see what happens later in the week. Dang it, no xtals for CX.

73,  
--Andy  
wallace@mc.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: Randy.Cook@Corp.Sun.COM (Randy Cook)  
Subject: BA Report - CHRS  
Message-ID: <9602051734.AA13317@mmmkt.Corp.Sun.COM>

Had some rare spare cycles, so I went to the first swap of the year for CHRS (Bay Area) on Saturday. I was with my friend and fellow stereophile, Joe Eschback, in search of tube amplifier deals. I wasn't even looking for BAs, but walked past a car in the parking lot with 3 R390As inside the trunk getting rained on. The guy wanted \$40, \$50, and \$275 for two sort-of working, and one "used it yesterday" units. All were in excellent physical shape. While I was thinking of potential explanations to my wife on why this huge radio is in the office, all three were sold.

I saw a SuperPro 210LX with a badly modified front panel and a couple of ratty Hallicrafters... not many BA receivers. BTW, I did walk out with a rare Dynaco integrated tube amp in excellent condition for \$50, but that's for a separate mailing list...

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: jproc@worldlinx.com  
Subject: BA Sighting's - R390's for Sale  
Message-ID: <Chameleon.4.01.2.960204173558.jproc@>

Dear BA's,

For anyone who is interested, there are several R390 receivers for sale at:

Toronto Surplus and Scientific  
(416) 490-8865 (closed Mondays)

FAX (416) 785-7955

Some had missing meters but at least one unit I spotted was equipped with covers. Front panels would be judged from fair to good. I didn't have time to make a pricing enquiry but they should be in the \$200 to \$300 range. TS&S are equipped to ship anywhere in Canada or the U.S.

Regards,

~~~~~  
Jerry Proc VE3FAB  
E-mail: jproc@worldlinux.com  
Radio Restoration Volunteer  
HMCS Haida, Toronto Ontario  
~~~~~

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: GaryReed <deer119@alllinux1.alliance.net>  
Subject: BC-348 burning resistors  
Message-ID: <m0tjNJS-000pb0C@alllinux1.alliance.net>

Over the weekend I spent many hours making resistance readings and redrawing my 348-R schematic. I think the power supply was misconnected. I think the correct connections are as follows (go to's are easy to check with ohmmeter) B+ ,white with red tracer. Goes to pin 4 of the output tube VT152 (6K6). B- ,white. Goes to pin 1 of the output transformer. +12 , white with red tracer. Goes to front panel lamps. +12, +12, white. Goes to pin 2 of most (all?) tubes. There is a picture of this receiver page 106 of the May (95) issue of Antique Radio Classified. Some of you are burning resistors in their power supply's. You may want to check your power supply wiring. Also the RS conversion sheet gives the following information. "At 300 volts, the receiver draws 75 MA, at 250 it draws about 60 MA, and at 200 volts about 50 MA. Accordingly, we can use as a power transformer either Stancor's P6120, Thordarson's 17R36 or 70R78, or UTC'S Y660 or Radio Shack # 95702. There are no markings on my transformer ! But I did find a box of small power transformers at a flea market and will be testing them. I did get on the Air Sunday with my Ranger II/Drake 2B but I'd hoped to do it with the BC-348, maybe next year.....73 Gary WB80FU

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: David Stinson <72227.1640@compuserve.com>  
Subject: BC-348 fixes  
Message-ID: <960205113115\_72227.1640\_EHM49-3@CompuServe.COM>

Gary WB80FU wrote about rebuilding his BC-348-R:

>...When I first powered it up I cooked two resistors,  
>the output plate resistor (73) and the 1st IF plate resistor (57-5).  
>... The power supply has a 275-0-275 power transformer  
>and used diodes. The B minus was grounded and I didn't  
>know that it shouldn't be until I read the info in boatanchors.  
>...conversion sheet published by radio shack that states "The receiver  
>will operate satisfactorily with a B+ of 200 to 350 volts, but 250 to 300  
>volts is recommended..."

Here are four possible culprits in your crispy-crittered resistors:

1. The B- must be connected to the junction of resistor 63-4 and choke 123-B, and not be directly grounded. This provides grid bias to the output tube.

2. Resistor 73 is the output screen resistor. The plate is supposed to be connected to B+ through the audio output transformer, 123-A. If your output transformer primary is open, or if the transformer has been removed (don't be surprised, lots of people did it), then the plate is dead and the screen is drawing all the current and getting fried.

3. Don't believe for a minute that 300 VDC or more is "OK" in a BC-348. The bypass caps are OLD and will leak and short at high voltages. Keep the B+ down to between 200 and 250 VDC. Your 275 VCT transformer with a silicon diode bridge is probably delivering about 360 volts DC. Old bypass caps that don't show leakage on an ohmmeter may dead short at that voltage. If you can, remove the diodes and replace them with a 5Y3 full-wave rectifier. You'll get a safe 250 volts. If you must go with sand diodes, try half-wave rectification with better filtering and a voltage divider to get the B+ down around 250 VDC.

4. Do take a hard look at the bypass caps in those old cans, especially 48-1A, 48-2B, 49-1A, 49-1B and 11-9. In fact, unless you have a shorted IF can, a shorted tube plate or some strange run-away oscillation (all pretty rare problems), about only thing that can toast resistor 57-5 is bypass cap 11-9.

Good luck!

73 DE Dave Stinson AB5S/7  
72227.1640@compuserve.com

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: n7oo@azgate.nj7p.ampr.org (Jack Taylor)  
Subject: BC-348 schematics and more  
Message-ID: <3176@NJ7P>

BC-348 and about 100 other old mil gear schematics are available in .GIF format via anonymous ftp to 137.80.1.2 /pub/hamradio/schematics

73 de Jack

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: Henry van Cleef <vancleef@bga.com>  
Subject: BC348 power supply  
Message-ID: <199602051813.MAA04993@zoom.bga.com>

I don't have a BC348 or its schematic in front of me, so won't comment on connections between a power supply and the set. What I will comment on is the design of a suitable supply for the set.

Various notes say essentially "you can run with most any old B+ between 200 and 300 volts." If you're a foot slogging GI in WWII and need a radio, if you can get 180 volts on the plate, the radio will receive, and it won't blow up if you put as much as 300 on it.

A happy choice is between 225 and 275 volts. I would shoot for 240-250. More volts is not going to make the radio more sensitive. Indeed, the only tube that needs more than 180 volts on the plate is the output tube. Less volts is less watts. For one thing, the B+ current is going to be multiplied by less volts. For another, the B+ current is going to go down. Keeping B+ down will reduce watts by in a more-or-less square law proportion. Those watts translate into heat being dumped into the chassis.

Some actual tests with my RME-45 showed that dropping B+ from 310 to 260 volts made no difference whatever in receiver sensitivity. It did drop the dissipation from 45 to 30 watts. Maximum audio output went down from about 4 to 3.5 watts (7C5 working into a 3400 ohm transformer). The payback was in improved local oscillator stability. That whole chassis is cool as a cucumber.

For a suitable supply, if you have a power transformer with a 500VCT plate winding (250-0-250 volts) and a 5V 2 amp filament winding, use an 80 or 5Y3 with a conventional capacitor input filter. Round up a small choke, 4-10 hy., and use a pair of 20 mfd. caps on either side of it. For a choke, you can use the output transformer from a junk AA5 radio.

Leave the voice coil terminals open. Nothing beats a choke in the filter.

If you have a transformer with 700-750 VCT, use a choke input filter. The RME-45 has a 750VCT transformer, feeding an 80 with a 10 hy. choke input filter. Voltages in operation are 290 at the 80 filament, 285 at the first filter section, and there are some ohms between the first and second filter section for filtering that drop the B+ to 260. The problem in using a choke input filter with an 80 is that if there is no load on B+, with 750VCT, B+ will surge up to nearly 500 volts. The RME-45 has an 0D3 to provide some load, so turn-on surge is about 320 volts. An alternative to using an 80 is to use an 83V or 5V4, which will warm up at about the same rate as the radio tubes. It will produce about 30 volts more B+. Another suitable rectifier is a 6AX5, which is a "double current" 6X5 (140 ma max.). You'll need 1.2 amps at 6.3 volts to heat it, and to do things right, will want to use a bleeder on the power supply to pull its heater up to about 200 volts, using a separate (from the radio) 6 volt heater winding.

For a solid state circuit, you can use a 115-230 volt isolation transformer, a 1N4005-equipped bridge rectifier, and a capacitor input filter as above. This will give about 260-270 volts at the output of one pi section of filter with a choke in it. You can gild the lily by adding a second section to the filter, and putting about 150 ohms in front of the third filter cap, which should put you right around 250 volts with the radio operating. Put 10 ohm resistors in series with each of the two positive diodes in the bridge, to limit peak current.

In designing a capacitor input filter, do yourself a favor, and don't follow the example of the el-cheapo "hi fi stereo" golden ear toob crowd. Use a choke in the first filter stage to do the serious filtering, and keep the first filter cap down around 20 mikes. The payback in using a small first cap is in improved power factor and reduced power transformer heating.

Thus far, I haven't said anything about modifying the BC348, so if you're a purist, all of the above won't change your radio. As I recall, these beasts use a back-bias circuit to develop bias for the audio output tube. This is nothing but a resistor between the radio's B- bus and the power supply B-. For a 6K6, it should develop about -17 volts across it. It should also have a big fat filter cap across it, and may also want a small cap (.02 mike) for RF bypass, which an electrolytic doesn't do very well. Watch out for a smoked back bias resistor or a leaky bypass cap across it. Most techs get foxed by a back bias circuit, but they are perfectly simple and straightforward. Take a moment to check that you've got bias on the audio output tube.

If you have lots of 120 hz hum in the audio, take a look at the plate

of the audio voltage amplifier. You can throw a lot of ripple at the rest of the radio, but this point needs to be clean. 60 hz hum is either pickup from somewhere or heater-cathode leakage, generally in the audio voltage amplifier.

In work like this, your refurbished Tek scope is a jim-dandy tool to use. You do, of course, have a refurbished Tek scope, don't you? I walk down RF/IF screens, looking for RF on the screens and cathodes (inadequate bypassing) and audio noises in the audio section. Fixes are to get adequate bypassing. .01 mike 600 volt caps are fine for screen and plate supplies in RF/IF, a little more is better on cathodes. Baby electrolytics solve the problems in audio stages. If the set needs some help over the original design, you can just paste these in at the appropriate points.

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\*\*\*\*\*  
Hank van Cleef vancleef@bga.com vancleef@tmn.com  
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From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: john <johnmb@nando.net>  
Subject: BC348 schematics scanned in...  
Message-ID: <9602051326.AA13137@merlin.nando.net>

I've scanned in schematics of the BC348, which I can attach to a mail document, and send to you. I would like your comments on the resolution and readability of the scan when you get it.

Thanks,  
/john

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John Brewer johnmb@nando.net  
WB50AU/4 AMI #24  
Vintage Gear web page: <http://www.zynet.com/~johnb>  
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From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: Andy Wallace <wallace@mc.com>  
Subject: CE-20A on xtal -- SSB?  
Message-ID: <9602051301.AA09594@taku>

----- Begin Included Message -----

From: MODSTEPH@ACS.EKU.EDU

Subject: Re: Modification Dilemma (ARC-5 w/ CE 20A)

Remember that you can run the thing (CE 20A) on CW using crystals - don't

know if that also applies to SSB (altho would expect not - heterodyne SSB to proper band, isn't it, working with 9 mHz VFO???)

----- End Included Message -----

Ugh, I'm not near the manual right now. My first gut feeling is that you can do SSB with just the crystal, as it is a phasing unit and has SB1 and SB2 on the function switch. Why would they have both if it defaulted to just one? And also, this was probably in the days when the sideband "standard" was not firm.

Would love to hear about any CE-20A or other Central Electronics restorations. My 20A is moving up in the pile, especially since the B-line and AT-1 seem to be doing okay.

73,

--Andy

wallace@mc.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996

From: garland@MPS.OHIO-STATE.EDU (James C. Garland)

Subject: Central Electronics 100V Restoration

Message-ID: <01I0UZL8D03U8WW2UG@MPS.OHIO-STATE.EDU>

>/ Would love to hear about any CE-20A or other Central

>/Electronics restorations.....

>/73,

>/--Andy

>/wallace@mc.com

>/=====

Hi Andy,

I've just gone through a complete checkout and restoration of a CE 100V, and can offer my experience as an illustration of how I usually proceed with old rigs. Ordinarily, I check out a new boatanchor very carefully before I plug it in, but in this case I decided to take a chance because the guy I bought it from (out of state) swore to me it worked. Caveat emptor.

Well, at least it didn't smoke when I plugged it in and connected an audio oscillator to the mike jack. But it sure as heck didn't work either. My bird wattmeter showed about 5- 20 watts on cw (depending on the band), the VOX circuitry didn't work at all, and the monitor receiver I keep on my workbench produced mostly a buzz which was more-or-less on the right frequency. I took it out of its cabinet and blew the cobwebs from the underside. It was clear I had my work cut out for me.

I first checked all the tubes on my Hickcock 750 and found a bad 6EA8, which I replaced. While I had the tubes out, I cleaned all the tube pins and mating sockets with DeOxit D5. Ditto on the switch contacts. I then cleaned and lubed the detent assemblies on the switches, and sprayed tuner cleaner into the pots.

I then went through a very cursory alignment, tweaking the 8MHz output circuits, doing a quick-and-dirty sideband null (by adjusting the rf and af phase shift circuits while listening to the unwanted sideband on my monitor receiver). I also did a visual inspection of the innards, remounted a loose filter choke (and, once the choke was temporarily out of the chassis, used the extra working space to replace a couple of 40uF electrolytics in the bias power supply), touched up a few questionable solder connections, and replaced a couple of coax jumpers which looked pretty bad. Another check with the Bird, and the power output had climbed to 50 watts. I was making progress, but now it was time to do some serious sleuthing.

Step one was to check the power supply voltages, all of which were normal. Next I started through the rf circuits. Using my trusty TEK 2236 scope, I checked the PTO output (it was fine), and the crystal oscillator outputs (also fine). The scope patterns looked normal and the output levels were adequate, up through the basic sideband generating circuitry. After careful alignment, I got the ripple to nearly vanish on the 8MHz SSB signal out of the sideband generating circuits. Now to tackle the mixers.

The first 12BY7A mixer had low output. I always find it hard to troubleshoot mixers, since the signal on the plate of the mixer tube is a combination of the oscillator signal and the "real" signal, and it's hard to tell from the scope pattern whether each is of adequate amplitude. The desired mixed output coming through the plate tuned circuit (a broadband coupler) was definitely low, about half normal. Since the broadband couplers are something of a mystery, I hoped that the problem wasn't there. As it turned out, I found the problem when I touched my scope probe to the 12BY7A screen and saw the power output jump from 50 to 55Watts. Obviously, the scope capacitance, about 20pF, was influencing the mixer efficiency. This was a real mystery, since the screen was bypassed with a .005uF capacitor so that, theoretically, the diddly little capacitance of the scope probe shouldn't have any effect. Unless....the .005uF capacitor had opened up. (I knew it hadn't shorted, since I had full screen voltage.) A bit of experimentation and I determined that the capacitor was, indeed, open. When I removed it, I



saw it had a 100V rating, which was curious, since the screen voltage is about 160V. In looking further, I found a 100 ohm resistor in series with the screen supply, whereas the schematic indicated it should be 27K. Replacing both parts fixed the mixer stage completely, and power output jumped to 100 Watts plus. Now the picture was clear: a previous owner of the 100V had tried to install improved screen circuitry, in accord with a factory service bulletin. Unfortunately, the owner put in a screen bypass capacitor with inadequate voltage rating, and it probably burned out the first time power was applied. Noting that the power output was too low, the owner then tried to compensate by raising the screen voltage, replacing the 27K screen dropping resistor with a 100 ohm resistor. This scheme of course didn't work, so the owner just lived with the problem. It took thirty years to finally fix the problem! If only these old radios could talk.

Now on to the second mixer, also a 12BY7A. I noticed that the tube seemed damned hot, even in standby when the tube should have been biased to cutoff. My trusty scope showed the bias voltage in standby to be -12V, instead of -120V, and the operating bias -1V instead of -14V. The poor 12BY7A was running hot as a firecracker. No wonder the output signal sounded crummy! It was easy to find the cause -- a shorted 220pf postage stamp mica. I find these darn micas to be frequently bad, which seems odd since they look so rugged. It took me 3 hours to replace the capacitor, which was buried underneath a 14 deck bandswitch! To get at it, I unsoldered a shield partition, removed the chain drive from the bandswitch and slid the switch detent and shaft out of the front of the panel, taking care to catch all the fiber washers and spacers between the decks. Once I had the switch disassembled, I could move the offending deck out of the way to get at the bad capacitor. Whenever I reach this point in a restoration, and look at all the dangling wires and parts and hardware sitting in little muffin tins on my workbench, this sense of panic sets in. Will I EVER get this thing back together???

Actually, it went together smoothly, and with a sinewave on the mike connector, the scope showed the output to be a clean SSB signal, with just a trace of ripple. Carrier suppression was in excess of 50db. At this point, I took a break to celebrate with a couple of Buds and a bowl of pretzels.

Next it was time to do a precision alignment of all the rf circuits, setting the screen voltages and cathode resistances (trimpots) on the mixers to minimize spurious outputs. I also aligned the PTO with a frequency counter. What a delight that PTO is! I could get it to track within 50Hz, over the full 500KHz range! Not bad, for 1959 technology!

Now on to the VOX circuit, which was dead as a doornail. After that bandswitch and those mixers, the audio and control circuitry was a breeze. The problem turned out to be a bad ground connection on the audio filter module. I discovered the problem when I reached in to pull out the 6AL5 meter rectifier and brushed my hand against the filter module case which,

being ungrounded, was sitting at 120VAC. Ouch! The 6AL5 went flying across the room, with the expected consequences, so I plugged in another one. I resoldered the ground contact and the vox worked perfectly. No more problems!

Next, I changed the panel bulbs (I do this routinely on old radios, whether they need it or not.), calibrated the meter (trimpots again), which shows r.f. amps (how quaint!), line voltage (why, I wonder?) and--believe it or not-- power INPUT. Where is the grid current and plate current metering, you wonder? So do I.

Finally, I plugged in a D104 and listened to myself on a 51S1. Up to this point, I'd been mostly "listening" with my scope and "talking" with an audio oscillator. The rig sounded just great, and the scope (the 100V internal scope, not my Tek 2236) trapezoid looked fine. What smooth audio those old phasing rigs make! I set the vox delay and sensitivity, set the AM power input to 100 watts, the cw input to 175 watts, trimmed up the focus and width adjustments on the scope. I was done, and no burned out power transformers or other impossible-to-locate malfunctioning parts! Time to celebrate again.

The 100V is an interesting transmitter. In some ways it is far ahead of its time, maybe a decade or more, and was obviously designed as a labor of love. All conceivable features are there-- load mismatch indicator, a.f. clipper/limiter, no-tune broadbanded circuitry, ultralinear output tubes, an oscilloscope indicator to monitor linearity, a two-speed linear PT0 with 1KHz calibration. It has individual power output controls for cw and am, with a master power output that controls everything. There are several key jacks, depending on whether you want to key the VOX circuit, FSK circuit, etc. It is truly amazing.

On the other hand, despite its sophistication, I don't think the 100V represents sound commercial engineering practice. (I feel the same way about the C.E. 600L linear amplifier, which I just restored last month.) To me, the circuit seems like the creation of a very clever engineer who set out to design the world's most sophisticated homebrew transmitter, and then, after getting it to work, decided to mass produce it. In my opinion, it's too complicated to be a successful commercial product. Of its 26 tubes, fewer than half are actually used to generate a signal, the others being used for various control and monitoring purposes. The 100V lacks the simple elegance of, say, the Collins S-line. A 75S3, for instance, gets outstanding performance with only 10 tubes and no complicated switching. (One could make the same objection about much military gear, the R390A for instance, but then the military cares more about optimizing performance than keeping costs low. Unfortunately, C.E. was selling to the penny-pinching ham community.) C.E. products were amazing examples of engineering prowess, but it is clear to me the grouchy voices of the bean counters in the accounting office were nowhere to be heard. If you are lucky enough to have a 100V or 200V transmitter, or a 600L amplifier, then you have a rare jewel. There is

nothing like them, so treat them well.

73,

Jim W8ZR

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "Kevin L. Anderson" <kla@helios.augustana.edu>  
Subject: Classic Exchange report  
Message-ID: <Pine.SUN.3.91.960205083551.23973A-100000@helios.augustana.edu>

Boatanchor gang,

Thought you might enjoy a report from one op in this last weekend's Classic Exchange to see what equipment was playing at the local cinema. All QSOs 40m CW using my canoe-anchor Heath HW-16 with HG-10B VFO:

K5JGU	Bud in Texas	Tx: Homebrew
		Rx: ???
N1QY	Ron in Mass	Tx: Knight 50
		Rx: HQ-140X
WS5E	Warren in TX	Tx: HX-10
		Rx: SX-115
N4QY	Larry in NC	Tx: Valient
		Rx: Drake 2B
NC1E	John in CT	Tx: Collins 32S3
		Rx: Collins 75S3B
N5AIT	Al in KY	Tx: Harvey Wells TSB50D
(I know he reads BA-list)		Rx: Nat'l NC-98
VE3NJ	John in Ontario	Tx: Heath DX-40
		Rx: Drake 2B
KC5EPZ	Dennis in TX	Tx: Homebrew, 808s
		Rx: Drake R4C
K7DU	George in Wyo	Tx: Viking Peacemaker
		Rx: FT-101EE
W8KGI	Jim in NM	Tx: Drake T4X
		Rx: Drake R4B

I guess I enjoyed most the weak but doable QSO with N1QY and his Knight, followed by N5AIT (Hi, Al, and thanks for QSO) and his whooping/clicking Harvey Wells ("acting up", eh?). Could have used more of the band, as we were hemmed in badly by digital and kilowatt SSB QRM. I could have used a warmer space heater, as my HW-16 couldn't cut it -- it was below zero outside, and my basement shack about freezing -- had to

stop between QSOs to go upstairs and thaw my frozen feet (I had boots on and four layers of clothes). Interesting to hear half the transmitters wavering +/- 50-100 hz; heard someone's QSO (not those I worked) as their VFO shot right through my entire bandwidth, from top to bottom and off somewhere.

Thanks for reading. Now back to your hamfest reports and regular programming. Cheers/73. Kevin, KB9IUA  
kla@helios.augustana.edu

\*\*\*\*\*  
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Opinions expressed here are my own and do not represent the  
U.S. Army Corps of Engineers or the Federal Government.

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: berg stephen erik <z931086@corn.cso.niu.edu>  
Subject: Clegg Interceptor Dial Problems  
Message-ID: <Pine.3.89.9602051441.B8485-0100000@corn.cso.niu.edu>

I had a little time this weekend, so decided to try to fix the backlash in the Interceptor's dial mechanism. I had taken a cursory look at it earlier when recapping the power supply and audio output stages, and thought that what I was dealing with was a normal split gear arrangement. Sadly, that was not the case. It uses a dual gear arrangement, but instead of a split gear and worm drive, uses a spur drive arrangement. My suspicions were confirmed when I found that the backlash occurred only at the points around the 6 and 2 meter SSB calling frequencies. What I have is a set of worn gears. The dial was apparently made by Eddystone in Britain. Does anyone here know of a source of spare parts, or have some ideas on how I can get this thing fixed?

Tnx & 73,

Steve WA9JML

z931086@corn.cso.niu.edu

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "Emil Switzer" <switzer\_e%a1.clust.CLUST.umc@engult.lxe.com>  
Subject: Command Set Question  
Message-ID: <45400150206991/88541@CLUST>

Over the years I have had many Command set transmitters and receivers and a question has kept bugging me. It seems that for every receiver I have stumbled across there must be 100 transmitters. Has anyone else made this observation? Was there a great discrepancy in the number produced? Reliability problem - etc? This seems puzzling since most aircraft installations I have seen used 3 receivers and two transmitters.

73, Emil

switzer\_e@elmg.com

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: MODSTEPH@ACS.EKU.EDU  
Subject: CX Afterglow  
Message-ID: <01I0ULK9CBB60096J4@ACS.EKU.EDU>

From the sound of things, this was the best participation yet in "CX," and I was particularly pleased to hear the phone activity. Here-tofore CX has been mainly CW on 40 and 80...

Many of you participated - hope you enjoyed the event. This one was about our 42nd one, btw. First one was September, 1976 (or maybe 1975), and we have been doing two a year ever since.

Please send your scores and logs to Jim in New Mexico (W8KGI) - address on p. 108 "Contest Corral," Feb QST... Or check with me when I have it at hand via private email and I shall send it on. It is really important that we get the feedback (and two ounces' postage with SASE for the next newsletter) so (1) we can improve the event, and (2) we have materials for the newsletter, which comes out twice a year, just before each CX.

I managed to get almost all of my equipment on the air and qualified: seven transmitters, seven receivers. One each I did not get to are at the school where I teach (used by the Amateur radio club) , and it was too

cold to drive over to fire them up.

Heard some great rigs on the air, including a few homebrew, and loved the comment here last night about the ART-13 cooling system...

A couple of my favorite pieces include my harvey-Wells Bandmaster TBS-50D, like my very first transmitter, and a Glove Scout 680 which I gave \$5 for at Dayton - seeing the rig underneath the coat of burnt orange paint someone had added... And yesterday I inally made contact with Jim's (W8KGI) Glovoo Scout 680A - which someone had painted GREEN!! Oh well, sorry about that, purists. But we both have them working - and maybe the only QSO on record between Glove Scouts of that colour combination...

Hope to see y'all in the next CX: last Sunday in September, probably. You have the enitre summer hamfest season to prepare...

73, Al N5AIT  
modsteph@acs.eku.edu

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: Nick England <nick@cs.unc.edu>  
Subject: CX experience  
Message-ID: <199602051936.0AA27340@altair.cs.unc.edu>

It was my first time on the air during a Classic Exchange, and I had a lot of fun!

I \*was\* kinda puzzled Saturday AM when I didn't hear anyone talking about the contest or hear anyone making contest exchanges in the afternoon. I figured maybe it was a CW thing only or just not well known. It was Sunday AM before I looked at the QST listing and realized the contest started Sunday 4 Feb! Oh well, at least it wasn't the other way around!

So Sunday AM I decided to finish up the T/R relay wiring for the Viking II I had just gotten working on the bench and try it on the air. Had a nice chat with several North Carolina folks on 75 phone and it seemed to work OK. So I powered on the other 6 operating positions (2 of which had been

bench-tested but not air-tested) and decided to give it a whirl.

I started at one end of the bench and tuned up into a dummy load - zero beat the next transmitter and so on - all the receivers and transmitters set for 3880 - I figured one band one mode would be pushing the envelope for this kind of lash-up.

I found a really great roundtable operating out of the Atlanta area on 3885 and checked in - there were a dozen or more folks, most with multiple rigs - I recognized Boatanchorite Tom W4UOC and I guess there were others there as well. Gonset twins, ARC-5s, a KW-1, GSB-100, Globe Kings & Champions and you-name-it...It was a fun gathering.

During the afternoon I managed to achieve my goal of operating all 7 positions for at least 3 contacts each with no equipment failures and only once transmitted into a dead short (wrong co-ax switch position) and once setting up a great howl as I forgot to mute a receiver on the other side of the room :-)

The line-up at KD4CPL (553 years total equipment age)

32V-1	75A-4
Ranger IINC-303	
Valiant II	SX-101
Valiant ISX-88	
Viking IISX-115	
Apache	Mohawk
DX-100	NC-300

I figure it was great practice for a serious effort next time and I had a lot of fun as did all the folks I heard on the air. And it acted as a real motivator to get some of those rigs fixed up and working - I only had 3 positions working before the Christmas holidays.

See you in the next Classic Exchange ??

73 & have fun,  
Nick KD4CPL  
nick@cs.unc.edu

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: Walt Novinger <waltn@hooked.net>  
Subject: Re: Dial lens to borrow?  
Message-ID: <30F0517E.2B7A@hooked.net>

SP600@aol.com wrote:

>

> Hi,  
>  
> What other type of plastic molding does Mr. Doyle Roberts do? Does he have  
> e-mail  
> address? Its nice to know someone out there does do this kind of work and  
> doesn't charge a arm and a leg!!

>  
> CHARLES P JEDLICKA N9SOR  
>  
> \\\\\\\\\\\\\\\HAMMARLUND COLLECTOR\\\\\\\\\\\\\\\\\\\\

> The only plastic work I know of Doyle doing is dial lenses. He  
advertises in ER and/or ARC, and can be reached at:

Doyle Roberts  
HC63, Box 236-1  
Clinton, AR 72031  
501.745.6690

Good luck!

Walt

--

=====

Walt Novinger	Real Radios Keep You Warm At Night!
Collector of hollowstate communications receivers and test equipment	
waltn@hooked.net	wnovinger@shl.com
	CI\$: 73348,2015
<a href="http://www.hooked.net/users/waltn">http://www.hooked.net/users/waltn</a>	

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "Tom Taylor" <tom\_taylor@taligent.com>  
Subject: Drake TR CW oddities  
Message-ID: <n1388616316.7643@taligent.com>

Reply to: Drake TR CW oddities

I was excited to put a lot of old Drake gear on the air for yesterday's Classic Exchange contest. It was a lot harder to find people to talk to than what I'm used to in other contests. Over a four or five hour period, I only had nine QSO's.

Anyway, I tried to use a TR-4 and TR-4C on CW. Both of them experienced somewhat similar problems. When keying the TR-4, the rig automatically switches to transmit (unlike the TR-3 which has to be switched manually). After keying the rig, however, the TR-4 gets itself into a situation where the internal relays quickly switch back and forth from transmit to receive. It



sounds about the same as when you've got a microphone connected but don't have the anti-vox control set correctly. The rig's audio continually trips the vox circuit. In this case, I didn't even have a mic connected. The settings of the VOX and ANTI-VOX controls had no effect on the self-oscillating relay condition. The radio works normally on SSB. Any suggestions?

I gave up on the TR-4 and tried my TR-4C. It has two problems. First, the sidetone is very weak and extremely chirpy. I made several contacts with this radio and I asked if my signal was ok. The other stations said the signal sounded normal. The second problem is the break-in (or VOX) release time. The rig remains in xmit mode for five seconds or longer after I'm done keying. Sometimes the rig stays in xmit mode and I have to fiddle with the mode switch to get the relays to drop. Again, the controls on the side of the radio seem to have no effect on this timing. I noticed on the schematic that there's a hardwired resistor that you can replace to change the vox release timing. Again, any suggestions?

Thanks,  
Tom aa6br

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>  
Subject: RE: Drake TR CW oddities  
Message-ID: <44815.owen@apollo.eeel.nist.gov>

In message Mon, 5 Feb 1996 09:46:46 -0600 (CST),  
"Tom Taylor" <tom\_taylor@taligent.com> writes:

> Reply to: Drake TR CW oddities

> After keying the rig, however, the TR-4 gets itself into a situation  
> where the internal relays quickly switch back and forth from transmit to  
> receive.

I am having the same problem on my T4XC but it happens ONLY when I use the VFO in the transmitter and not when I use the VFO in the receiver. I haven't had time to work on it yet. Like yours its fine on SSB. Let me know what you find. 73 Jim K4CGY

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: jproc@worldlinux.com  
Subject: RE: Early tactical UHF radios  
Message-ID: <Chameleon.4.01.2.960204200150.jproc@>

John,

>In the Navy, aboard ships in 1963-65 (COMSEVENFLT flagship, CLG-5 & CLG-8)  
>we had what were called TED/RED pairs. The RED was a URR-35.

Ahaa! You are confirming my suspicion that newer equipment such as the AN/URR35 was referred to by its predecessor. If I can take the statement in Ray Mote's Navy nomenclature list as gospel, then the RED receiver was never procured. Why then would the USN refer to a receiver that never seen the light of day? For BA'ers not familiar with the AN/URR35, it is a magnificently crafted, 22 tube UHF receiver. It would make a good collectable except for the lack of AM traffic in the 225 to 400 Mhz band.

Here is my time line theory for 200 to 400 Mhz UHF tactical naval radios:

	1944	1950's	1960's	1970's >>
Receivers	RDZ	RED(?)	AN/URR35A	}
				} Solid state xcvr
Transmitters	TDZ	TED	AN/URT502	
				<<<AM   FM >>>

>I don't remember too much about the tx at this point, but think it was  
>a single channel unit. Crystals were axial leads, hidden behind  
>a door, like the URR rx. Final tubes were 4X150's

It sounds like you have accurately described the 18 watt version of the TED transmitter. Even with a pair of 4CX150's in parallel, why would the transmitter be rated for 18 watts output max? Was the manufacturer being ultra conservative? Surely, this must have been idling power for a configuration which could have delivered 300 watts. BTW does anyone out there have a TED manual?

The AN/URT502 which in all respects looks like a TED in the RCN training manuals, had a 4 position turret that would accept the CR24/U, axial lead crystals. In the RCN, the radio operators used to have frequency switching drills. The object of the exercise was to take out the 4 crystals in the turret and replace them with 4 new ones as quickly as possible. Invariably, someone would drop a crystal or two on the deck. Since the crystals had a tubular body, the roll of the ship would cause them to vanish underneath equipment racks, never to be seen again :-)

By the way, just to illustrate how fast some components become obsolete, a very young RCN radio technician in Halifax found an old box of components which he could not identify so he took them to a senior officer for inspection. (This happened in 1995). Seems the young lad had found a box of CR24/U crystals and didn't know it. I guess this would be excusable if one

Regards,

```
>
>Here is my time line theory for 200 to 400 Mhz UHF tactical naval radios:
>
>          1944          1950's          1960's          1970's >>
```

```

>
>Receivers      |RDZ--->---RED(?)-->---AN/URR35A-----}|
>                                                    } Solid state xcvr
>Transmitters  TDZ--->---TED----->---AN/URT502-----|
>
>                                                    <<<AM | FM >>>

```

Jerry,

Most all the traffic on 220 - 400 tactical band remains AM except for the satcomm stuff. I hear it all the time, though you have to know where to look in this broad range. All commercial airports and military airports use these frequencies (for communications with military aircraft). You can hear aircraft on training missions or in the refueling loops if you are within range.

73

Joseph W Pinner  
Lafayette, LA  
KC5IJD  
EMail: kc5ijd@aol.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: jproc@worldlinx.com  
Subject: RE: Early tactical UHF radios  
Message-ID: <Chameleon.4.01.2.960205170523.jproc@>

Joseph,

>Most all the traffic on 220 - 400 tactical band remains AM except for the  
>satcomm stuff. I hear it all the time, though you have to know where to  
>look in this broad range.

I should have qualified my statement by saying that location is most important for tactical UHF reception. In Toronto, the airports rarely simulcast on UHF and there is no major military base nearby. In fact, there are only 36 military bases in Canada and many of them are located in remote areas. It wouldn't even help if I was in Halifax as the RCN has converted most voice communications to FM. I have spend much time scanning the UHF band from the ship and I rarely hear anything.

In the US, where population densities are higher than Canada and military bases are numerous, there is more opportunity to hear tactical AM

traffic. Any AM UHF receiver is not deemed to be high on my collectables list at least in this area :-)

Regards,

-----  
Jerry Proc, VE3FAB  
Radio Restoration Volunteer  
HMCS Haida  
E-mail: jproc@worldlinx.com  
Toronto, Ontario  
-----

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "Integration Area" <integrat@usr.com>  
Subject: Re: Early tactical UHF radios (TEDs)  
Message-ID: <9601058235.AA823546046@robogate.usr.com>

>Included in the training manual was a humorous reference to an AN/TED3  
>which translates to a ground transportable, nuclear powered, direction  
>finder - obviously a mistake :-)  
Some of the TEDs did get a mixed nomenclature. I saw a junked one at the Baranowsky scrapyard with a AN/ style tag "T-###/TED-#" (I do not remember the numbers). Just another example of the mess a government can make of a numbering system.

William Donzelli  
integrat@usr.com

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: MEC <danmec@inet.uni-c.dk>  
Subject: FS Old Heath catalogues  
Message-ID: <Pine.3.89.9602050938.A29108-0100000@inet.uni-c.dk>

I posted two old Heath catalogues here some weeks ago and somebody came back and wanted to buy them, but I have accidentally erased his msg.

Anyone out there wanting these ?

73 Rag oz8ro

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: flanders@GroupZ.net (Jerry Flanders)  
Subject: Got a Central Electronics 10B here  
Message-ID: <199602051828.MAA12359@uro.theporch.com>

/ Ugh, I'm not near the manual right now. My first  
/gut feeling is that you can do SSB with just the crystal, as  
/it is a phasing unit and has SB1 and SB2 on the function switch.  
/Why would they have both if it defaulted to just one? And also,  
/this was probably in the days when the sideband "standard"  
/was not firm./

/

/ Would love to hear about any CE-20A or other Central  
/Electronics restorations. My 20A is moving up in the pile,  
/especially since the B-line and AT-1 seem to be doing okay.

/73,  
/--Andy  
/wallace@mc.com

/=====

I have a one-owner CE 10B in storage that I built from the kit in 1956. I believe I still have the complete set of plug-in coils for it also. Also should have the manual.

As I remember, you CAN use crystals for SSB.

Mine is just gathing dust. I used to enjoy tacking on "additions", so it would have some extra holes here and there.

I could be talked out of it, if anyone is interested.  
Ask and I will get it down here for inventory and accurate description.  
Anybody know what they might sell for?

Jerry Flanders W4UKU flanders@groupz.net

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: cfb@novum.com  
Subject: Re: Hammarlund Manufacturing Dates  
Message-ID: <Chameleon.960204200934.cfb@net.indra.com>

I recently posted the following questions to the list:

'I'm looking for an accurate history which shows the manufacturing dates for Hammarlunds by model and s/n. Does anyone have such a list or know where to get

it? If not, does anyone at least know the range of years when each model was made?'

I was surprised to receive the grand total of only two informative replies, one from Shaun in Edmonton, Alberta, and another from 'The Hammarlund Historian' Robert Fowle.

I did however receive multiple requests from list members to forward the information directly to them. It seems I struck a popular chord, so I'm sending this to the entire list, as well as direct to those who requested it.

Here is Shaun's information:

'Communications receivers the vacuum tube era: 50 glorious years' by Moore, R. S. (1987) This is the first edition. I believe that there have been one or two editions since 1987. In fact, checking my references, Ray is up to the 3rd edition now. The one I have is softcover, staple and tape binding. You could write RSM Communications at:

RSM Communications  
P.O. Box 218  
Norwood, MASS  
02062

I know that many dealers/suppliers carry the book. Fair Radio certainly does. The HQ-129-X was produced from 1945-1953 (according to Moore). Sticker price was \$129 in 1945 and \$239 in 1953.

Robert's information:

I've been searching for 2 years to find somebody from the factory that might have that info. So far no luck, and consensus seems to be, from those I've spoke to, it doesn't exist.

Robert also promised to research the dates for when the various units were first and last advertised.

If anyone wants to keep following this thread, email me direct and I'll put you on the list.

Charles F. Bacon  
cfb@novum.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: David Adams <dave@flowserver.stem.com>

Subject: It lives!

Message-ID: <9602051802.AA29470@flowserver.stem.com>

Well, I got the Atwater-Kent 725 running. Wasn't nearly as much work as I thought it would be. I would be curious, if anyone is in the know, about what type of case it belongs in. I'm sure it doesn't belong in the tombstone it's currently in, but it's awful pretty.

73 de dave

Back to the S-27...

---

-----  
David J Adams                      N9UXU QRP-L #83  
dave@flowserver.stem.com        NorCal QRP #1442  
(415) 813-5028                  Flow Cytometry Specialist

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996

From: Michael.J.Knudsen@att.com

Subject: KWM-2 regeneration trouble

Message-ID: <9602052115.AA00531@bock.ih.att.com>

My KWM-2 seems to be getting worse at a problem that used to be intermittent, or at least confiend to the bottom of 80m (confined).

When I peak the receive preselector (which is shared with the transmit RF chain) the RF strip will sometimes go into regeneration. More like motorboating than howl and squeal, since as soon as the oscillation starts it makes a POP! and kicks the AVC up enough to stop the regeneration, at which point the gain builds back up and POP off we go again.

I can stop it by tuning off a bit, but this (a) loses RX sensitivity and (b) loses the TX peaking adjustment for grid drive.

I can think of some general fixes, like detuning some of the alignment slugs a bit, and of course chekcing some screen bypass caps. But first I wondered if any other M-2 owners had come acrss this bug and had some helpful hints where to start looking.

Could this be related to the neutralizing trimmers in the RF power section? I also noticed that I'm hardly getting any ALC this week, whereas I used to get plenty.

As a TX the rig seems to be working fine, other than the ALC problem.



Thanks es 73, mike k w9nrd/ae

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: rwilcox@newton.cacky.com  
Subject: Lafayette HA-500  
Message-ID: <9602051946.AA21314@newton.cacky.com>

All

Does anyone have any info on a Lafayette HA-500 ham band only receiver. I would like to get copies of the manual and a schematic.

```

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                                     \\\|\\|//
                                     |^ ^|
                                     (0|0)
/-----o00--( )--00o-----\
| Gary Wilcox (KE4VUN)           E-MAIL: rwilcox@newton.cacky.com|
| Commonwealth Aluminum                                     |
| Hwy 1957              FAX:    (502) 295-5700              |
| Lewisport Ky.         VOICE:  (502) 295-5461              |
\-----000-000-----/
```

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: Ronald Steinberg <rhstein@interaccess.com>  
Subject: Looking for  
Message-ID: <199602052013.0AA25833@thymaster.interaccess.com>

Looking for a good 210 tube ,ARC 5 Command T17 and manual  
Respond to:

Sam Macy KG9AM  
486 Glenwood Trail  
Elgin , Il 60120

Looking for a good 210 tube ,ARC 5 Command T17 and manual  
Respond to:

Sam Macy KG9AM  
486 Glenwood Trail  
Elgin , Il 60120  
AMacy@eworld.com  
708 695 0218

708 695 0218

Ron Steinberg      K9IKZ              rhstein@interaccess.com  
512 S Cherry      Itasca      IL      60143  
708 773 3583 hm      708 773 0822 hm fax

At work:      rentcom@mcs.com      <http://www.rentcom.com>  
847 678 7000 wk      847 678 9378 wk fax

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: Joe\_Wilkowski@mc.xerox.com (Wilkowski,Joe)  
Subject: Looking for a Hammarlund S-100 speaker..  
Message-ID: <"<AA58163181B7677C>AA58163181B7677C@X-MC-0819-MS2.XEROX"@-SMF->

I am looking for a S-100 speaker that is the accessory speaker for the  
HQ-100,110 & 105 TR.

Thanks,  
/joe  
joe wilkowski k8fc  
315-926-4080

pse email me only @ joe\_wilkowski@mc.xerox.com.

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: Dave Meier <71571.1744@compuserve.com>  
Subject: Looking for Hammarlund HX50(A)  
Message-ID: <960206003533\_71571.1744\_FHD37-1@CompuServe.COM>

I am assembling the Hammarlund station that was state of the art when I first  
set out to become a ham in 1965. I have picked up a good HQ-170A. I would like  
to match it with an HX-50 of some sort. Please be on the lookout for a good  
specimen. Other items I need include a matching speaker, a desk microphone  
(Electrovoice is shown in the QST ads of the time) and a good working Tymeter  
clock. Other suggestions are welcome.

Thanks & 73, Dave N4MW

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "Nickels, Bob" <RNickels@P16.IL50.micro.honeywell.com>

Subject: Mission Impossible BA  
Message-ID: <31161D68@mail\_gw.micro.honeywell.com>

Our cable TV system recently added the FX network and I'm enjoying the old "Mission Impossible" series all over again. Did anyone catch the Collins "S Line" modifications on Saturday nite's show?

Barney (master of all electronics) hot-wired an S-Line so "they can transmit on any frequency they want, and they'll only reach us". The Collins gear was in a conference room on a private plane, and looked authentic from the front. Once Barney opened the lid, it was clear that the prop man had not sacrificed a real Collins rig for the sake of this episode. Most obvious were five of what looked like filament transformers, along with exposed terminal strips and a metal octal tube. The "mod" worked great - my guess is that Barney disabled the tx and rx from the mixer on out, and put his signal in on the IF. It only took a few clip leads, but they were \*very\* carefully placed!

The bad guys used one of the little square mics like Johnson used to supply with it's CB rigs. And they even remembered to push the button to talk!

Much more realistic than when Kojak used to transmit over his police scanner!

73, Bob - KE0T

rnickels@micro.honeywell.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: DUBY TODD <dube2@mci.newscorp.com>  
Subject: My request for BC-456  
Message-ID: <199602051802.NAA07719@kafka.delphi.com>

I made a big mistake! I typed in the numbers wrong in my request; and put 456 instead of 654. What I need is a BC-654.

Thanks to everyone who sent information about the 456.

73,  
Dube Todd AB5AP dube2@mci.newscorp.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: David Adams <dave@flowserver.stem.com>  
Subject: Need heath parts  
Message-ID: <9602051756.AA29444@flowserver.stem.com>

Greetings all!

I came across a partially built heathkit. It is a VF-7401, but is missing a few parts. I was wondering if anyone out there with buckets of spare parts would mind rooting around for the following:

Heath Part #	Item
63-1289	Rotary switch
64-875	4-pushbutton switch assembly
206-1242	VCO bottom shield
206-1243	VCO top shield

I realize of course that I can always find useable replacements, but would like to gather original parts if possible. I called heath and they do not have any of them. Any info on other parts sources (or basket case 7401s would be appreciated).

73 de dave, n9uxu

---

=====

David J Adams	N9UXU QRP-L #83
dave@flowserver.stem.com	NorCal QRP #1442
(415) 813-5028	Flow Cytometry Specialist

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: JIM GARLAND <GARLAND@MPS.OHIO-STATE.EDU>  
Subject: New book on science of radio  
Message-ID: <01I0UQDW7SJ68WW47D@MPS.OHIO-STATE.EDU>

Dear fellow BAers,

I just came across a new book, "The Science of Radio," published by the American Institute of Physics, which may be of interest to the list. Briefly, it is written from a historical perspective, with 21 chapters beginning with:

1. The Solution to an Old Problem
2. Pre-radio History of Radio Wves
3. Antennas a Launchers and Interceptors of Electromagnetic Waves
4. Early Radio
5. Receiving Spark Transmitter Signals
6. The Mathematics of AM sidebands
7. The First Continuous Waves and the Heterodyne Concept
8. The Birth of Electronics
- ....and ending with
18. Multiplying by Sampling and Filtering
19. Synchronous Demodulation and its Problems

- 20. Analytic Signals and Single Sideband Radio
- 21. The Superheterodyne Receiver

The cost is 19.95, available from the A.I.P., Book Order Department, P.O. Box 20, Williston, VT 05495-9911

73,  
Jim W8ZR

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: "Greg Anders" <anders@autopsy.corp.sgi.com>  
Subject: Question about replacement HR050 transformer  
Message-ID: <9602050949.ZM11248@autopsy.corp.sgi.com>

My HR050T has blown its power transformer and the only replacement I found has a slight mismatch on the HV winding. The HR0 uses a 275-0-275V HV winding to develop B+. The transformer I have is 300-0-300V, although its 5V and 6.3V windings are identical to that in the HR0. I have mounted the replacement in the unit and briefly powered it up without any load on the B+. The B+ reads 258V which I believe is a bit high as the schematic in my manual was marked up by the original owner and indicates 225V at the output of the filter choke, which is where I took my reading.

My question is

Should I reinsert the tubes and measure this voltage with some load or would the higher B+ damage any of the tubes (6J7, 6K7, 6SG7, 6SK7, 6H6, 6V6, 6X4 regulator, 6C4)????

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: "ROBERT W DOWNS, WA5CAB" <103012.2130@compuserve.com>  
Subject: R-274(\*)/FRR  
Message-ID: <960205051638\_103012.2130\_GHU44-1@CompuServe.COM>

Group,

TM 11-487, first issued as a single volume 10 October, 1944, and revised 1950, 1959 and 1964, lists US Military electrical and electronic equipment. The later editions were split into multiple volumes, TM 11-487A (MIL-HDBK-161) covering radio equipment.

I'm looking at several photos in the last two editions as I write. R-274/FRR is not an SP-600 (or 400 either). With a good glass, I can read 'THE HALLICRAFTERS CO. CHICAGO ILL.' on the nameplate. Technical specs are approximately the same as for the SP-600. R-274A/FRR and R-274C/FRR are clearly SP-600's, although no commercial model is given. The photo, identified as R-274A/FRR, shows the six position crystal switch. R-274D/FRR isn't listed. However, a record in my Tech Manual database indicates that it is covered by a change to TM 11-897, which is the TM for R-274/FRR (I have the TM but not the change) so I assume that it is also a Hallicrafters set (scanning forward through the Digest as I write this, I see that someone has one and it is). I find nothing listed on R-274B/FRR.

It is unusual for the U.S. Army to assign the same nomenclature to two different radios, even when the technical specs are so similar. Even when multiple contractors built the same set, it was almost always basically the same set, as with BC-221, BC-342, BC-348, BC-610, etc. But wait, there's more.

R-320/FRC is shown in the '59 edition to be an RCA AR-88-F. R-320A/FRC is identified as an SP-600-J-4. Although I can't vouch for the J-4, it is also clearly an SP-600.

The contract dates seem to be 1948 - 1950, which was a period of unfortunate confusion in the U.S. Military. But that's another subject.

(Robert F., make appropriate corrections to the list I sent you).

73, Robert W. Downs, WA5CAB  
103012.2130@compuserve.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: David Metz <metzd@cfw.com>  
Subject: Re: R390A Manuals  
Message-ID: <9602052254.AA00712@milo.cfw.com>

>I understand the manuals for the R390A are still available from the  
>government printing office. If anyone has the information how to go about  
>ordering the please let me know.  
>Dale A. Hagert NMOH

Yes, they are available through NTIS, (NaTional Technical Information Service) via fax 703 487 4841. (Springfield VA.) You need to include your name, address, and credit card number and in from 2-12 weeks you should receive it. I called today for an inquiry and the R390, R390A, AND R392 are still available-- who'd have

guessed?

R392        TM 11 5820 334 35        \$27

R390        TM 11 5820 357 35        \$27

R390A       TM 11 5820 358 35        \$27

(be careful--- 357 and 358 makes a BIG difference in the above!)

I also asked about the following, and they are..Not available"

NAVSHIPS VERSION OF 390A            NAVSHIPS 0967 LP 060 2020

NAVSHIPS--FOR R1051B                NAVSHIPS 0967 LP 427 4010

(I believe Robert Downs can make you a copy of the 1051B (287 pages)

In addition, NTIS charges \$4-\$8/ order for processing fees.

My suspicion is that the KWM2a would also be available but I don't know the ARMY TM number on that one. Does anyone know that one? If known, could someone post to BA? It should be something like TM 11 5820 xxxx 35.

They do not send a confirmation copy of the order, just wait and hope and maybe send a fax inquiry after 8 weeks or so. As the above 3 BA's are currently available (today), all one has to do is send the info via fax. For other inquiries, one should send a fax asking if the EXACT TM/NAVSHIPS manual is available. They will fax you back with availability and price. They aren't real interested in looking one line above on the screen if your number is off my one. Basically, they can only order and search by number only, they cannot search by equipment.

73's dave            metzd@cfw.com

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996

From: johnculp@tricon.net (John S. Culp, M.D.)

Subject: Re: Radio Shack (Was Long life tubes)

Message-ID: <v01530500ad3b277eebdd@[204.176.127.33]>

>                            RE>Long life tubes                            1/26/96  
>They still honor it! "Course you don't get a lifetime warranty with the new  
>one, but it's fun to take a 6V6GT in and watch their eyes roll. I  
>understand they buy mostly from AES, and then a lone person remarks and  
>reboxes the tubes for their warranty program.  
>                            73, Scott

>"Never miss an opportunity to take advantage of Radio Shack, the last chance  
>stockroom, with the worst products on earth and an even worse sales staff"

I've got to say, my recent experience with Radio Shack tubes was good. Just before Christmas I found a great 1948 Philco AM BC table radio that turned out to only need a 50L6GT output tube. Not yet having an AES catalog at the time, I went to the Shack. The ca. 20 year old clerk freaked when I asked him to order a tube and he asked the manager, "Can we \_do\_ that?" The "old timer" (ca. 35) smiled and said, "Sure. Just call the parts order line and tell them what you want." The kid still didn't quite get it, and was asking me for the radio's manufacturer, model, etc. With a little coaxing from me, he got it ordered OK. ;-)

(The manager then told me a story about his electronics training in college "way back when." He said, "They showed us how tubes work, but told us not to pay much attention because we'd never see them. Then I got a job at a radio station, and everything there used tubes!")

The tube came in by and by, costing me \$7.00. That's cheaper than I could have gotten it, with shipping, from AES. It had a 90 day warranty, was marked made in the USA, and isn't a re-marked old 50L6GT. It has a conventional metallic getter, without the graphite coating inside the envelope that every old 50L6GT I've ever seen has. It's kind of nice to finally see the "innards" of one clearly!

John

-----  
"From whose womb has come the ice?  
And the frost of heaven, who has given it birth?"

Job 38:29 (NASB)

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: John Kolb <jlkolb@cts.com>  
Subject: Re: RE BC-348 Xtal  
Message-ID: <Pine.SC0.3.91.960204164413.10521A-100000@sd.cts.com>

On Sun, 4 Feb 1996 USSAILIS@forum.phast.umass.edu wrote:

> There are two obvious solutions: 1. build up two oscillators, mix the signals  
> and filter the output. Of course the oscillators must be 915 KHz apart. Use  
> this output to drive the oscillator tube in the BC348.

>

> The othr soln is to synthesize 915 MHz using a PLL. This will require an awful



> lot of tubes. You might use a chip. :)  
> Jim, W1EQ0  
>

The third choice would be to use a higher freq xtal and a IC divider.  
3660 kHz divided by four, or 9150 kHz divided by 10. But if I recall  
the thread, wasn't the problem that the xtal filter was bad, not  
a xtal for a BFO?

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: fhartery@KEAN.UCS.MUN.CA  
Subject: Special Thanks and Zenith TransOceanics  
Message-ID: <0099D6D0.956BEC31.1@leif.ucs.mun.ca>

Hi Folks,

A sincere, uttermost, thanks to all that responded to  
my need for specs on 1.5V filament pentagrids. I have forwarded  
all this info to Padgett Peterson, in his quest for a 1L6  
substitute. Hopefully, Padgett will rejoin the boatanchors list  
in the next little while, according to my recent correspondence  
with him.

In regard to the recent post for a T-0 cap, I have emailed  
the sender, but I will be keeping a email listing of all parts  
sources handy for those who need it. Hank Van Cleef's F.A.Q. in the  
rec.antiques.radio+phono group addresses this point quite nicely.  
However, in light of Murphey's Law, it may disappear from 'immediate'  
visibility just when it's needed. I will watch the boatanchors  
list and send it when called for.

I am still in a quest to try and assemble a rough house  
series of the T-0's. To my disappointment, a D7000Y slipped away  
from me, as the owner told me a battery leak had severely damaged  
the radio, only noticed in his preshipping inspection :{(

Sigh... Well in short order, here's what is on my missing list.

- (1) 7G605
- (2) R520/URR
- (3) a Royal 7000 (D7000Y)
- (4) and a "R"-7000 (which is not a Royal 7000 b.t.w.).

Well, I have used up enough bandwidth here, so if a description of  
any of the above radios is needed, please email me. If you have a  
model and are not sure if it's what I am looking for, or if you need

help on T-O's, please feel free to email me at anytime.

Thank you ever so kindly,  
Fabian (Fabe)  
St. John's, Newfoundland, Canada

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: "Nickels, Bob" <RNickels@P16.IL50.micro.honeywell.com>  
Subject: RE: Super-Pro  
Message-ID: <31166A5A@mail\_gw.micro.honeywell.com>

Re: BC-779 (SP-200 family)  
[Mark Mandelkern, Las Cruces, NM] asked:

>Are these of any value?  
>Has anyone reconditioned one lately?

My vote is yes! After re-capping and rigging up a suitable power supply, I've been really pleased with mine. I'd say the p-p audio is the best I've heard, including Nationals and my modified "hi fi" R390A!

Value? Paid \$45 for this one and \$50 for another one with P/S...so I guess that looks like a trend.

73, Bob - KE0T

rnickels@micro.honeywell.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: JIM\_ALLEN@HP-Cupertino-om5.om.hp.com  
Subject: Tuning Slugs  
Message-ID: <H000030e01a06bfb@MHS>

Item Subject: cc:Mail Text

I am in need of some of the round, threaded, gray tuning slugs for the Hallicrafters SX-28A. A few of mine got stuck and broken in an attempt to remove them. Maybe someone out there has a junker that has some left in it.

Thanks,

Jim

KC6VWV

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: post@ouvaxa.cats.ohiou.edu  
Subject: URL for some boatanchor pix  
Message-ID: <0099D784.83759251.230@ouvaxa.cats.ohiou.edu>

Ohio University Electronic Communication

Date: 05-Feb-1996 06:51pm EST

To: Remote Addressee ( \_MX%"boatanchors@theporch.com" )

From: Richard Post  
Services  
POST  
Dept: Instructional Media  
Tel No:

Subject: URL for some boatanchor pix

Fellow Harborers,

I have taken a few pix of some boatanchors with a low-end electronic camera. The URL is:  
<http://ouvaxa.cats.ohiou.edu/~post/PIX/BA.HTML>

Enjoy.  
73 de Rich KB8TAD

Received: 05-Feb-1996 06:59pm

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: Andy Wallace <wallace@mc.com>  
Subject: Re: What I meant about the neighborhood  
Message-ID: <9602051616.AA09805@taku>

----- Begin Included Message -----

From: haynes@cats.ucsc.edu (Jim Haynes)  
Subject: What I meant about the neighborhood

It's just that ARC is the kind of magazine that caters to, among ther things, the kind of people who pay \$300 for a Western Electric tube, working or not, and who pay \$900 for a once-cheap radio in a Catalin case.

----- End Included Message -----

Please don't take my poke as more than a poke, Jim. It was not with malice intended.

I agree with you -- but then I am not looking for \$900 catalins, beautiful though they are. (Philip Collins' RADIOS and RADIOS REDUX are beautiful picture books for those of us who can't afford a butterscotch Fada.)

Part of me wants to keep BA out of the "mainstream" publications, because I don't want to see \$100 Drake 2-Bs go the way of the all-American-five catalin. But that's selfish, and when you come down to it, BAs are still a bargain.

So anyway, now I will have to bug my dad for a few back issues of BA-friendly Antique Radio Classified to read. :-)

73,  
--Andy  
wallace@mc.com

From boatanchors@theporch.com Mon Feb 5 19:49:14 1996  
From: rsolomon@cctds.textron.com  
Subject: WTB; Gonset Twins  
Message-ID: <9601058235.AA823562574@cctds.textron.com>

I thought I had located a pair of Gonset Twins (G66/G77), but they seem to have evaporated. So the search goes on. Would like a clean, unmodified pair, with PS/Modulator. Cables and manuals would be nice also. Anyone have a pair they will part with ??

Contact me rsolomon@cctds.textron.com.  
Tnx es 73 de Dick, W1KSZ.

From boatanchors@theporch.com Mon Feb 5 11:45:20 1996  
From: tomash@airmail.net (Tom Aschenbrenner)  
Subject: WWII H2X Radar set  
Message-ID: <199602050132.TAA18846@server.iadfw.net>

Hi All,

I'm looking to get into contact with anyone who collects or has info  
on the WWII H2X 10Cm airborne radar set.

-----  
Tom Aschenbrenner  
tomash@airmail.net